

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

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June 9, 2015

Mark Woodke, Project Manager  
Ecology and Environment  
720 Third Avenue, Suite 1700  
Seattle, WA 98104

Dear Mr. Woodke:

Included are the results from the testing of material submitted on June 3, 2015 from the 10PB, 10-060115-203137-0015, F&BI 506058 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michele Costales Poquiz  
Chemist

Enclosures  
NAA0609R.DOC

# FRIEDMAN & BRUYA, INC.

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## ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on June 3, 2015 by Friedman & Bruya, Inc. from the Ecology and Environment 10PB, 10-060115-203137-0015, F&BI 506058 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Ecology and Environment</u>
506058-01	BH12GW
506058-02	BH14GW
506058-03	IR01GW
506058-04	IR04GW

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/15

Date Received: 06/03/15

Project: 10PB, 10-060115-203137-0015, F&BI 506058

Date Extracted: 06/03/15

Date Analyzed: 06/03/15

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL  
USING METHOD NWTPH-Dx**

**Extended to Include Motor Oil Range Compounds**

Results Reported as ug/L (ppb)

<u>Sample ID</u>	<u>Diesel Extended</u>	<u>Surrogate</u>
Laboratory ID	(C <sub>10</sub> -C <sub>36</sub> )	(% Recovery)
		(Limit 41-152)
BH12GW	1,200	87
506058-01		
BH14GW	<250	91
506058-02		
IR01GW	<250	93
506058-03		
IR04GW	<250	97
506058-04		
Method Blank	<250	89
05-1045 MB		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/09/15

Date Received: 06/03/15

Project: 10PB, 10-060115-203137-0015, F&BI 506058

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER  
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS  
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	115	119	63-142	3

**Data Qualifiers & Definitions**

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

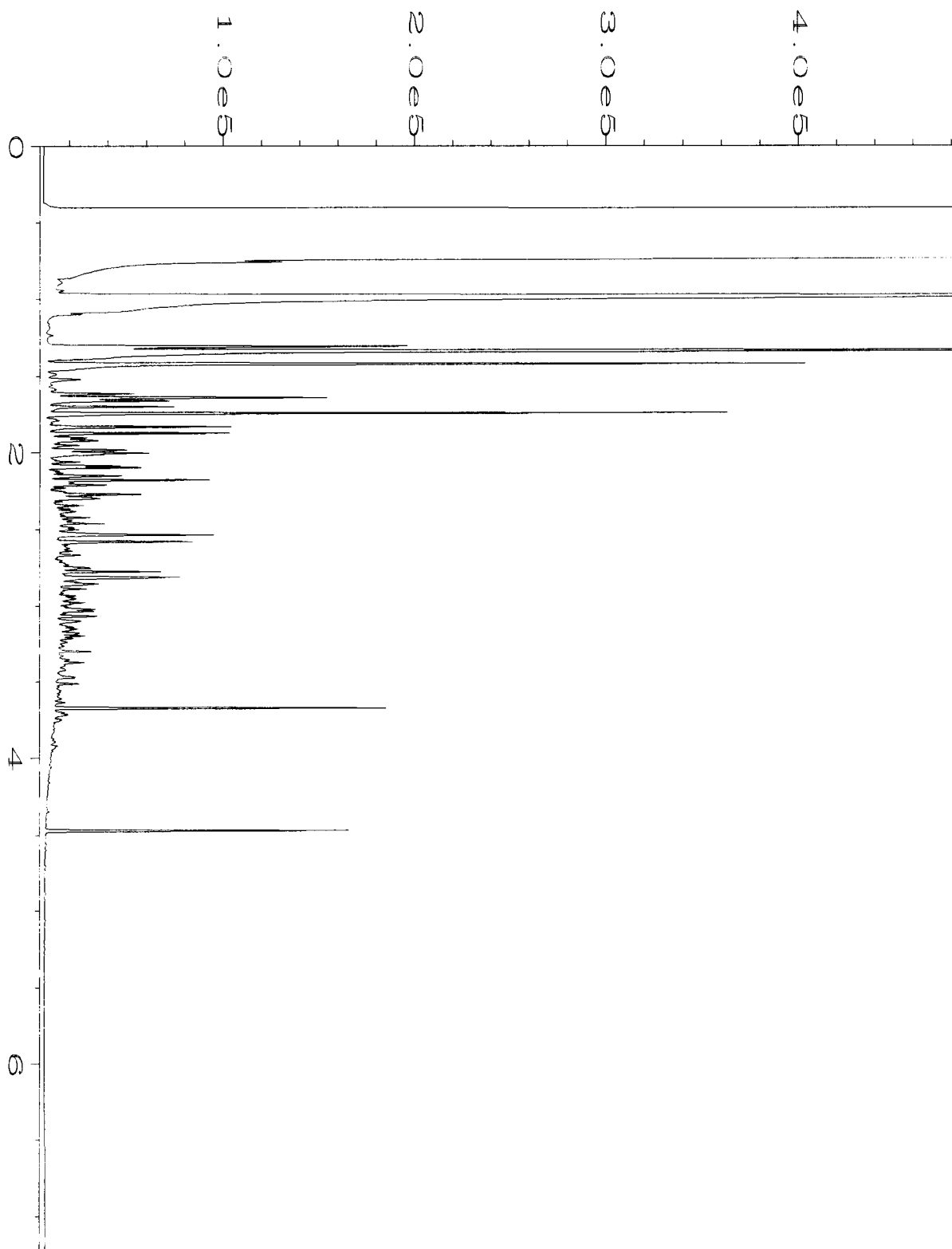
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

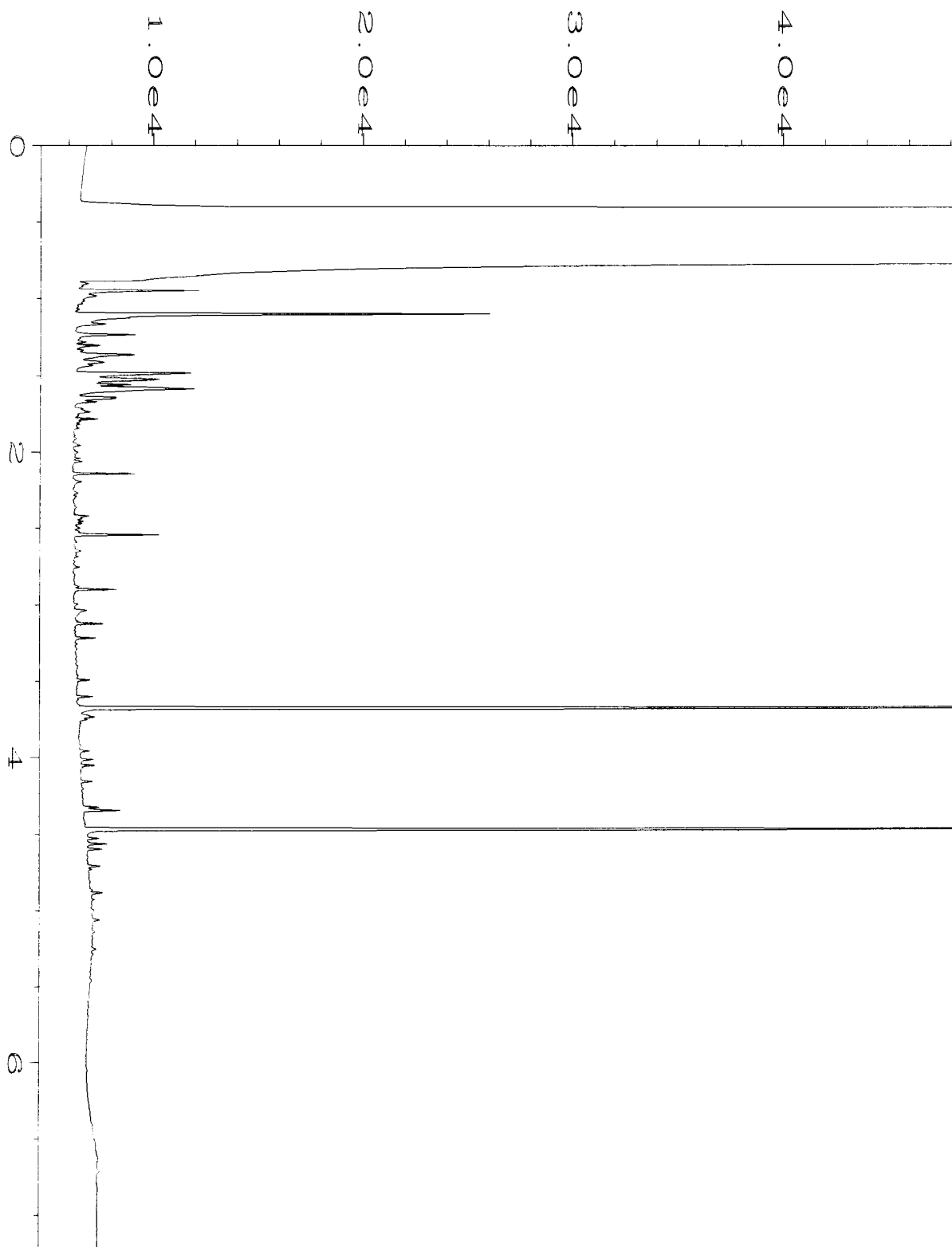
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

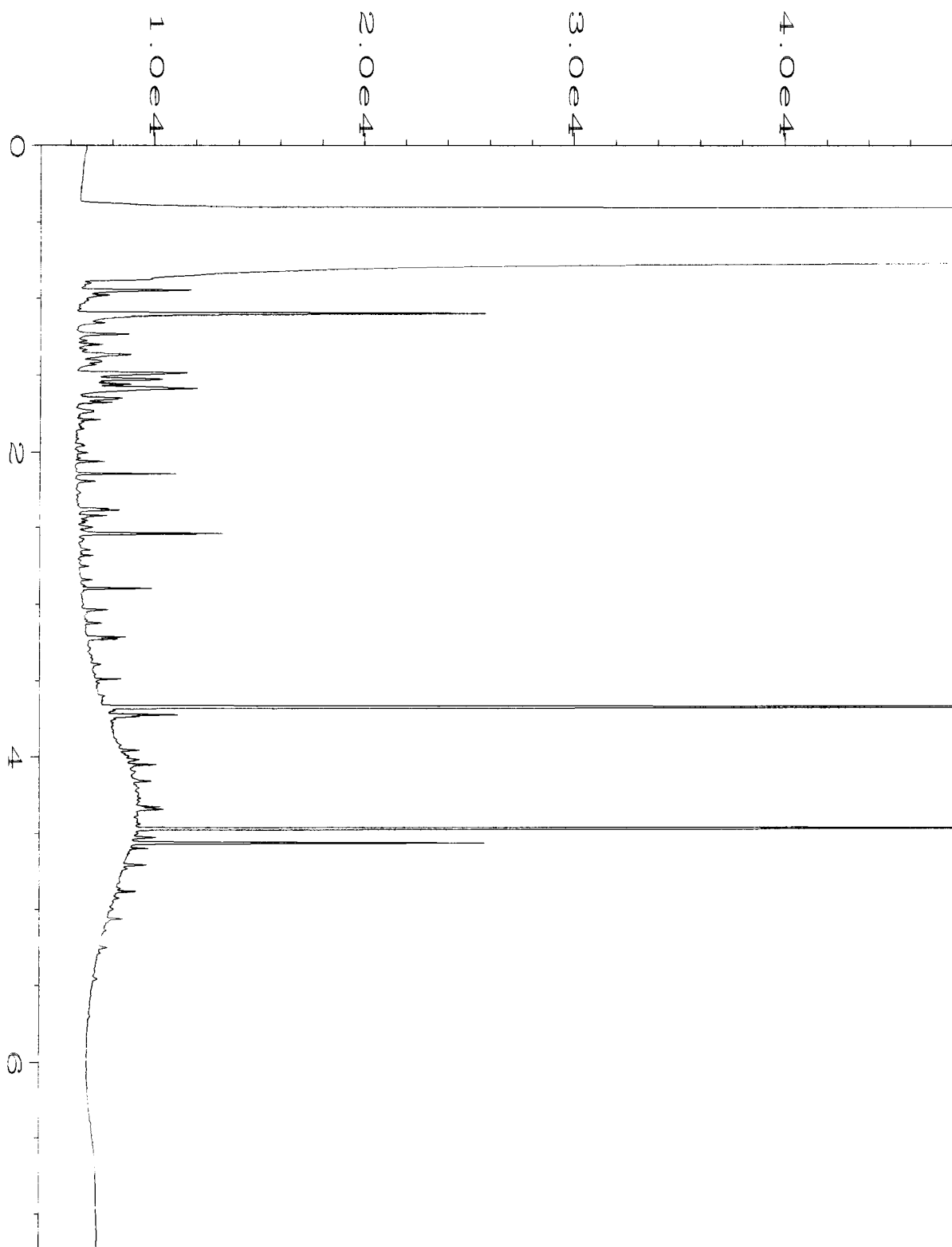
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Data File Name	: C:\HPCHEM\1\DATA\06-03-15\044F1001.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 44
Instrument	: GC1	Injection Number	: 1
Sample Name	: 506058-01	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 03 Jun 15 05:53 PM	Analysis Method	: DX.MTH
Report Created on:	: 04 Jun 15 09:14 AM		

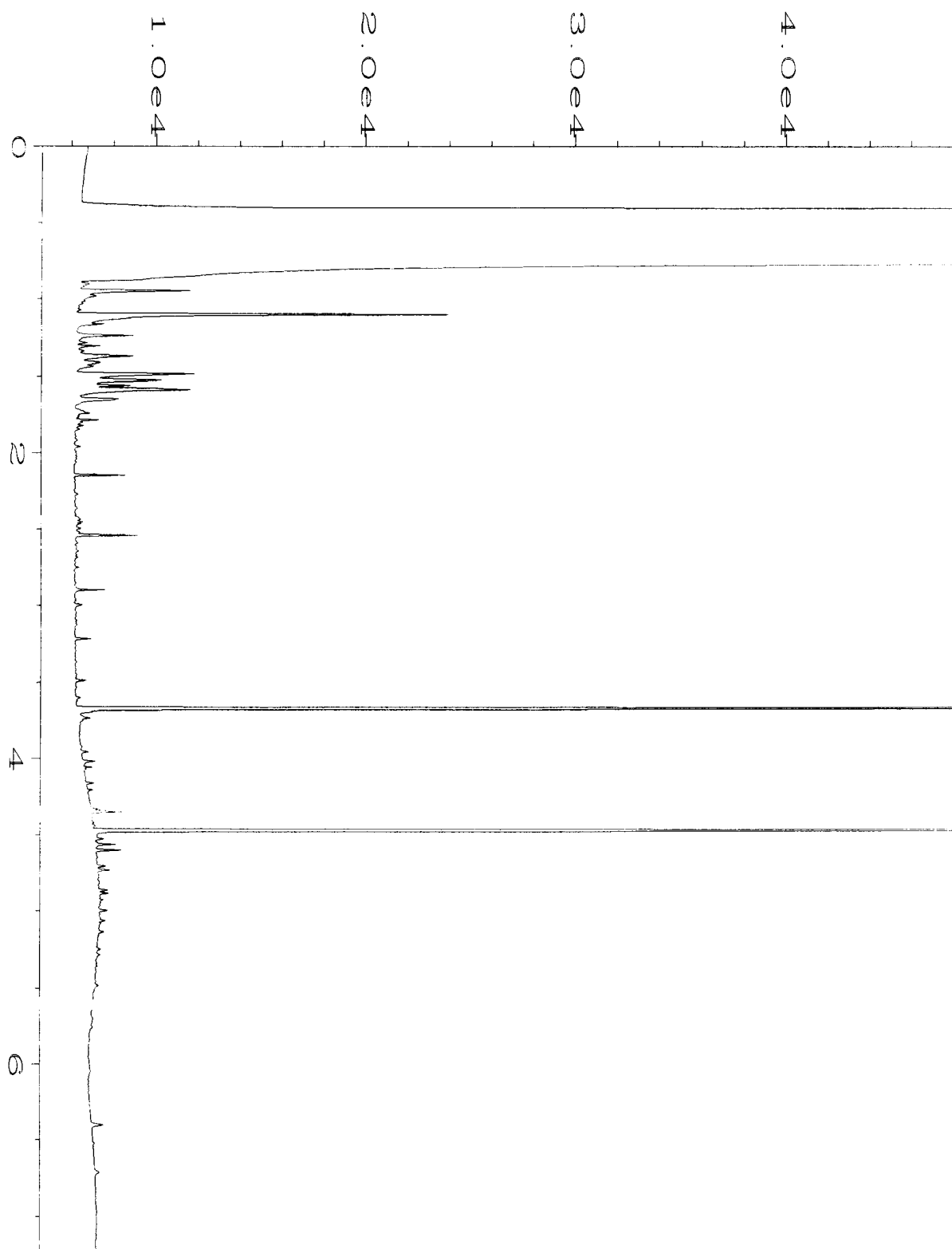


Data File Name	: C:\HPCHEM\1\DATA\06-03-15\045F1001.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 45
Instrument	: GC1	Injection Number	: 1
Sample Name	: 506058-02	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 03 Jun 15 06:04 PM	Analysis Method	: DX.MTH
Report Created on:	04 Jun 15 09:14 AM		

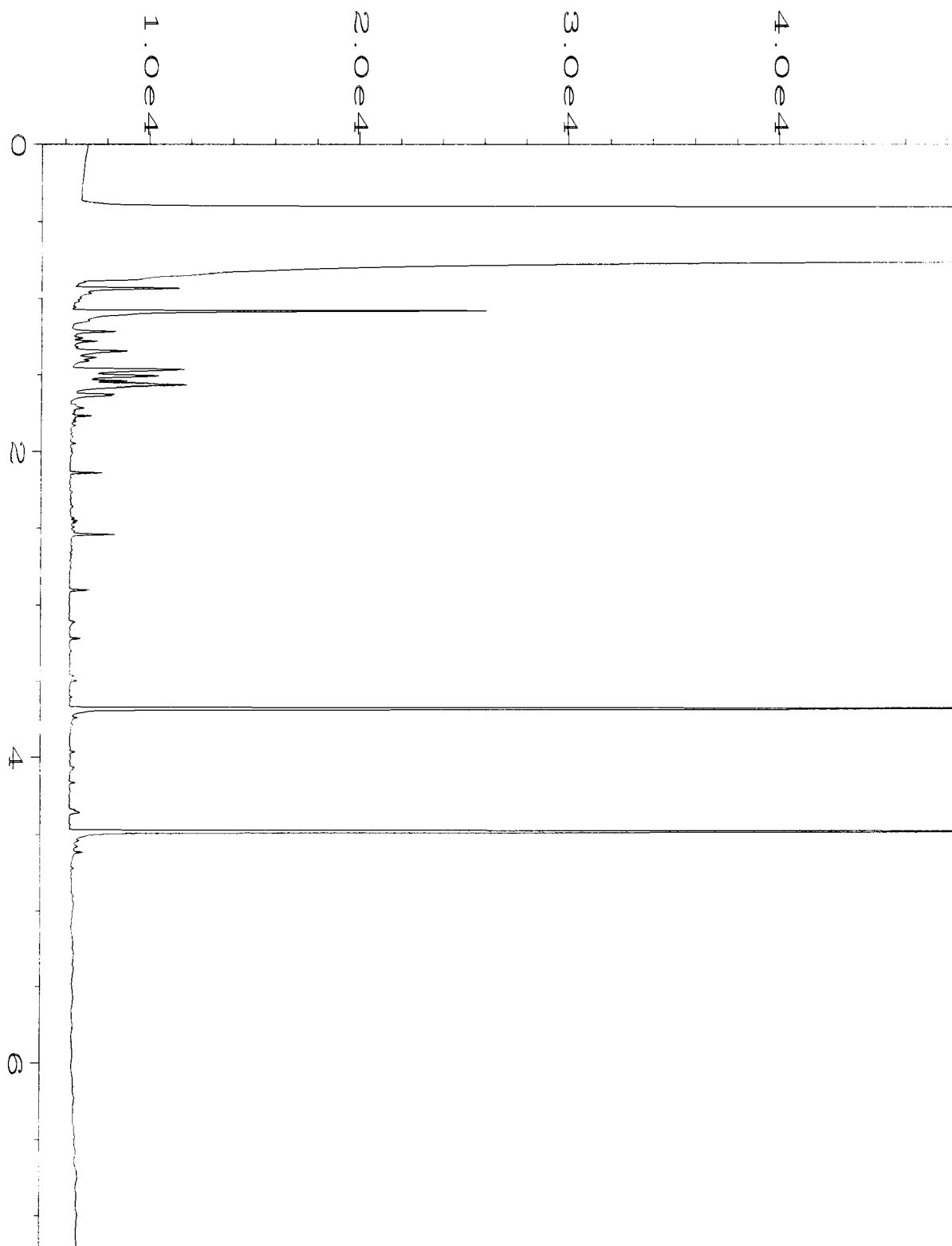


Data File Name	: C:\HPCHEM\1\DATA\06-03-15\046F1001.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 46
Instrument	: GC1	Injection Number	: 1
Sample Name	: 506058-03	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 03 Jun 15 06:15 PM	Analysis Method	: DX.MTH
Report Created on:	: 04 Jun 15 09:14 AM		

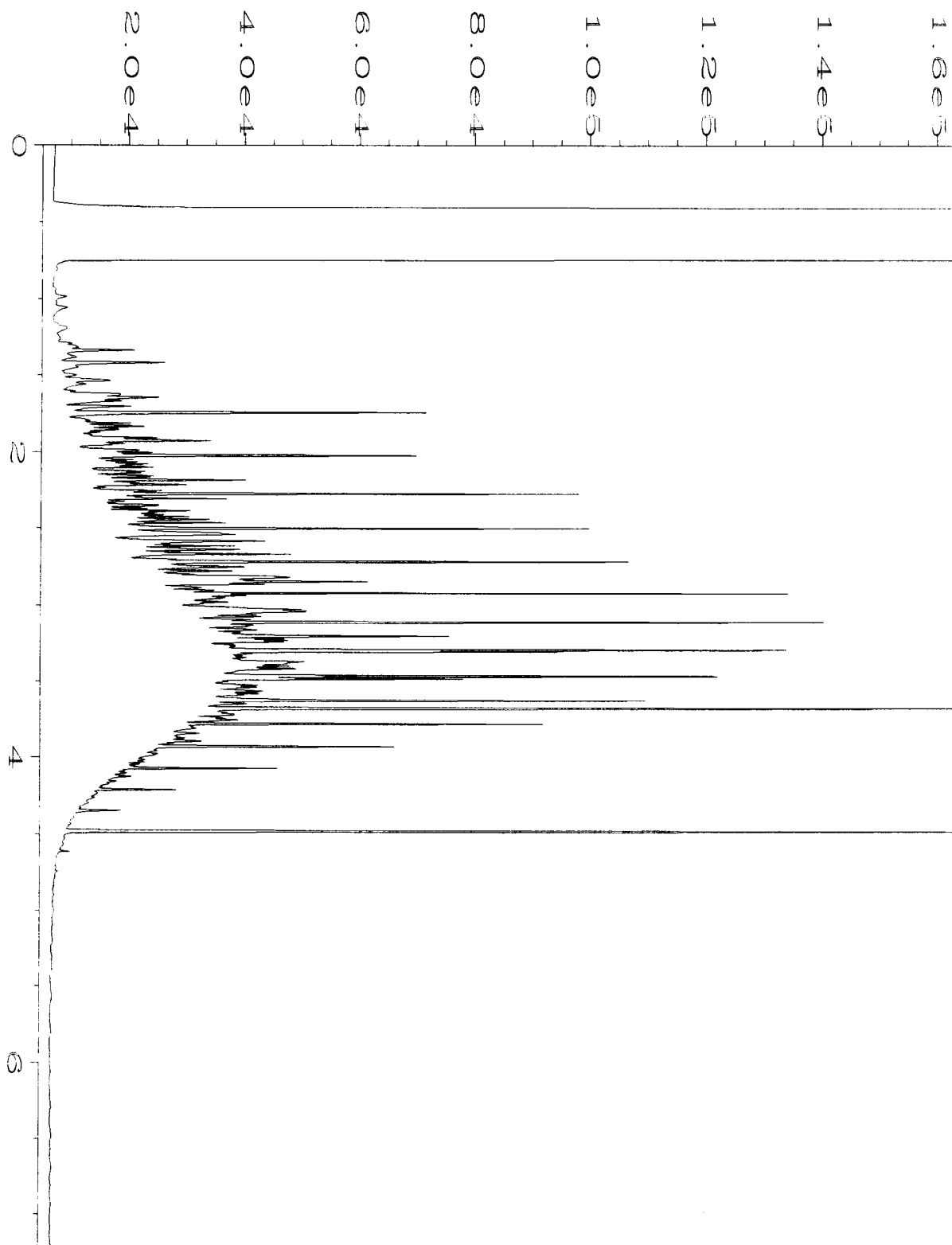




Data File Name	: C:\HPCHEM\1\DATA\06-03-15\047F1001.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 47
Instrument	: GC1	Injection Number	: 1
Sample Name	: 506058-04	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 03 Jun 15 06:26 PM	Analysis Method	: DX.MTH
Report Created on:	04 Jun 15 09:14 AM		



Data File Name	: C:\HPCHEM\1\DATA\06-03-15\032F1001.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 32
Instrument	: GC1	Injection Number	: 1
Sample Name	: 05-1045 mb	Sequence Line	: 10
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 03 Jun 15 03:41 PM	Analysis Method	: DX.MTH
Report Created on:	: 04 Jun 15 09:14 AM		



Data File Name	: C:\HPCHEM\1\DATA\06-03-15\003F0201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 3
Instrument	: GC1	Injection Number	: 1
Sample Name	: 500 Dx 44-94C	Sequence Line	: 2
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 03 Jun 15 08:50 AM	Analysis Method	: DX.MTH
Report Created on:	04 Jun 15 09:14 AM		

**Airbello:**

## Site # 10PB

0-06015-203137-0015  
Cooler #: 12  
Lab: Friendman & Brya  
Lab Phone: (206) 285-8282

[illegible]

SAMPLES TRANSFERRED FROM	CHAIN OF CUSTODY #

TPH-Dx per Kurt Johnson 6/3/15

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
to lab	Nu. John EDE	6/2/15 7:30	John EDE	6/3/15 10:30	

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